

USSR/Optics

K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10619

and its dc component, and these are applied respectively to two pointer meters. Normalizing the coefficient of amplification of the dc components to unity (setting the pointer of the second instrument at the "red marker"), one obtains the value of the relative pulsations of the light flux by directly reading the first pointer instrument. The accuracy of the "strobometer" is better than 1%.

Card : 2/2

TKACHUK, N. N.
USSR/Physics - Luminescence

FD-2984

Card 1/1 Pub. 146 - 25/28

Author : Tolstoy, N. A.; Tkachuk, A. M.; Tkachuk, N. N.

Title : Temperature dependence of relaxation time of luminescence of barium and potassium platinocyanides and fluorite activated by europium

Periodical : Zhur. eksp. i teor. fiz., 29, ³ September 1955, 386-387

Abstract : By means of the method of the ultra-taurometer (N. A. Tolstoy, DAN SSSR, 102, 935, 1955) the present writers succeeded for the first time in investigating the kinetics governing the photoluminescence of several substances for which the time of extinction of luminescence lies in the time interval 1/10 to 10 microseconds (the absence of such data on the relaxation of photoluminescence in his time caused S. I. Vavilov to call this interval a blank in luminescence (Izv. AN SSSR, Ser. fiz., 13, 216, 1949). They find that for all three substances ($K_2[Pt(CN)_4 \cdot 3H_2O$, $CaF_2(Eu^{++})$, barium platinocyanide) the brightness of luminescence is proportional to the intensity of excitation E and that the times of extinction and flare-up do not depend upon E ; thus all three cases are concerned with monomolecular processes representing comparatively slow fluorescence. Four references: e.g. P. P. Feofilov, DAN SSSR, 99, 731, 1954.

Submitted : May 27, 1955

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755920020-0

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755920020-0"

TOLSTOY, N.A.; TROFIMOV, A.K.; TKCHUK, A.M.; TKACHUK, N.N.

Kinetics of the luminescence of platinum cyanide compounds.
Izv.AN SSSR Ser.fiz.no.5:583-590 '56. (MLRA 9:9)
(Luminescence) (Platinum cyanide)

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755920020-0

SEARCHED, INDEXED,

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755920020-0"

· Tkachuk, N.N.

USSR/Optics - Physical Optics

K-5

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 12935

Author : Tolstoy, N.A., Tkachuk, N.N., Tsenter, M.Ya., Mansurova,
Z.S.

Inst : Leningrad Technological Institute, State Optical Institute
USSR

Title : Investigation of the Scintillation of the Flash Flareup
Curve for the Glow of the ZnS-Mn Phosphors.

Orig Pub : Optika i spektroskopiya, 1956, 1, No 5, 719-728

Abstract : A new procedure is proposed for the investigation of the
flash flareup and attenuation of luminescence, based on
the application of a one-shot light modulator (magneto-
electric gate, controlled by an electronic circuit).
With the aid of this modulator, an investigation was ma-
de of the flash flareup of a series of ZnS-Mn phosphors.

Card 1/2

TKACHUK, N.N.

USSR/Crystals.

B-5

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18329

Author : N.A. Tolstoy, A.K. Trofimov, A.M. Tkachuk, N.N. Tkachuk.
Title : Luminescence Kinetics of Platinum Cyanide Compounds.

Orig Pub : Izv. AN SSSR, ser. fiz., 1956, 20, No 5, 583-590

Abstract : The kinetics of the luminescence of anhydrous and hydrous salts of $M/\overline{Pt(CN)_4}$, where M may be Li, Na, K, Po, Cs, Mg, Ca, Sr, Ba, Tl, La, Pr, Nd, Sm, Gd, Dy, Er, Tu, Yb, was studied with an ultrataumeter. In case of all these salts, the brightness of the stationary luminescence is in proportion to the excitation intensity, the intensity rise and quenching curves are symmetrical and exponential. The relaxation time is 10^{-6} to 10^{-7} sec. The luminescence kinetics depends in a complicated manner on the cation nature, the amount of water of crystallization and the crystalline structure of polymorphous modifications. The luminescence kinetics and the luminescence spectrum

Card 1/2

- 84 -

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755920020-0

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755920020-0"

51-6-11/26

AUTHORS: Tolstoy, N. A., Tkachuk, A. M. and Tkachuk, N. N.

TITLE: Flash Emission of Luminescence. (Vspyshechnoye razgoraniye lyuminestsentsii.) I. ZnS-Ni Phosphors. Part I. (I. Fosfory ZnS-Ni. Chast' I.)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.II, Nr.6, pp. 759-769. (USSR)

ABSTRACT: The red band of the ZnS-Ni phosphor exhibits flash emission. The phosphor was excited with 365 m μ line of mercury. The flash was observed using a light filter. The intensity of the flash increased with the duration of the dark interval between two consecutive excitations, t_0 . The maximum intensity was reached at a value of t_0 which increases with decrease of temperature (see Fig.1). Preliminary illumination of the excited phosphor with infrared and green-orange light affected the flash emission. The infrared illumination shortened the dark interval before the flash but did not affect the maximum flash

Card 1/3

51-6-11/26

Flash Emission of Luminescence. I. ZnS-Ni Phosphors. Part I.

intensity. Illumination with 578 or 546 $\text{m}\mu$ lines of mercury decreased the ability of the phosphor to emit in a flash. If this green-orange illumination was of sufficient power and duration the flash emission disappeared altogether. The ZnS-Ni phosphor which can emit in a flash was found to possess a wide band of complementary absorption (Fig.5). It was also found that kinetics of the blue-band emission (Zn) is closely related to kinetics of the red band (Ni). The authors suggest that flash emission is due to transitions of electrons or holes from one localised state ("first localisation") to another such state ("second localisation"). Students of the Leningrad University A. Yeremeyeva and O. Popova, took part in this work. There are 6 figures and 10 references, 9 of which are Slavic.

Card 2/3

51-6-11/26

Flash Emission of Luminescence. 1. ZnS-Ni Phosphors. Part I.

ASSOCIATION: State Optical Institute imeni S.I. Vavilov; Leningrad
Technological Institute imeni Lensoveta, Chair of Physics.
(Gosudarstvennyy opticheskiy institut im. S.I. Vavilova;
Leningradskiy tekhnologicheskiy institut im. Lensoveta,
Kafedra fiziki).

SUBMITTED: November 28, 1956.

AVAILABLE: Library of Congress.

Card 3/3

Tkachuk, V.V.

48-4-5/48

SUBJECT: USSR/Luminescence

AUTHORS: Tolstoy N.A., Tkachuk A.M., Tkachuk N.H. and Mansurova Z.S.

TITLE: Flash Brightness Rise of Zinc-Sulfide Phosphors (Vspyshechnoye razgoraniye tzink-sul'fidnykh fosforov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957,
Vol 21, #4, pp 495-498 (USSR)

ABSTRACT: A rise in the flash brightness of the luminescence long-wave band is observed in ZnS-Mn; ZnS-Ni; ZnS-Co and also in the "pure" ZnS (apparently due to iron admixtures). The flash may be 6.5 times as bright as stationary phosphorescence of ZnS-Ni. The intensity of flash depends on the duration of interruption of t_o in excitation illumination. There is an optimum time of $t_{o \max}$ ("ripening time") which corresponds to maximum flash. The value of $t_{o \max}$ depends on the phosphor composition and temperature. Temperature-dependence of $t_{o \max}$ is expressed by the following equation:

$$\frac{1}{t_{o \max}} \approx e^{-\gamma/kT}$$

Card 1/2

TITLE:

Flash Brightness Rise of Zinc-Sulfide Phosphors (Vspyshechnoye razgoraniye tzink-sul'fidnykh fosforov)

48-4-5/48

The process of flash "ripening" is interpreted as a thermal transfer process of electrons from the local "supply levels" to the local "flash levels". After a sufficient time, electrons leave thermally also flash levels. The law cited above can be derived on the basis of these conceptions.

The article is followed by a discussion of the topics touched in the report.

No references are given.

INSTITUTION: Not indicated

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 2/2

TKACHUK N.N.

SUBJECT: USSR/Luminescence 48-4-14/48

AUTHORS: Tolstoy N.A., Tkachuk N.N. and Preobrazhenskiy R.K.

TITLE: Kinetics of Infra-Red Luminescence of cuprous Oxide (Kinetika infrakrasnogo svecheniya zakisi medi)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #4, pp 521-522 (USSR)

ABSTRACT: Development of the ultrataumeter made it possible to investigate luminescence kinetics of cuprous oxide.
The study of dependence of luminescence relaxation time τ on temperature and content of ultra-stoichiometric oxygen has shown the following: τ anomalously increases from 5×10^{-8} to 5×10^{-6} sec with the temperature rise from -183°C . At the room temperature the τ -value ceases to rise and falls at the further heating (temperature quenching).
The increase in oxygen content leads to τ -decrease at all temperatures except the lowest.

Card 1/2

48-4-14/48

TITLE: Kinetics of Infra-Red Luminescence of cuprous Oxide (Kinetika
infrakrasnogo svecheniya zakisi medi)

Citing the 3 possible ways of accounting for the τ -rise with temperature, the author favors the third one according to which the absorption mechanism bears an exciton character. Exciton decay on a charged acceptor leads to photoconductivity, and on an uncharged acceptor leads to luminescence. Assuming that the cross section of exciton capture is larger for the uncharged acceptor, the total cross section of all exciton capture centers decreases with temperature rise and the τ -value of luminescence increases.

The report is followed by a discussion.

No references are cited.

INSTITUTION: Not indicated

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 2/2

1 R&D CARD, VOL. 1

SUBJECT: USSR /Luminescence 48-4-43/48

AUTHORS: Tolstoy N.A., Tkachuk A.M. and Tkachuk N.N.

TITLE: Ultrataumeter (Ul'trataumetr)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957,
Vol 21, #4, pp 595-611 (USSR)

ABSTRACT: In order to measure relaxation processes whose duration is within the limits from 10^{-5} to 10^{-7} sec, a special apparatus, "ultrataumeter", was designed and constructed. Investigations of the kinetics of some luminophores were carried out with the aid of this apparatus.

The ultrataumeter uses photoelectronic multipliers. One of them is of the FEU-19 type (antimony-cesium photocathode), and the other one of the "AEG" firm (cesium oxide photocathode). The multipliers are supplied from a rectifier with electronic stabilization.

As the Soviet industry does not manufacture oscillographs suitable for application in an ultrataumeter, a special oscillograph was designed and constructed by the authors. This

Card 1/3

TITLE: Ultrataumeter (Ul'trataumetr)

48-4-43/48

oscillograph is valuable also for the application of the method of electric differentiation. Its sensitivity to inertia is $(1 \text{ to } 2) \times 10^{-8}$ sec. Its horizontal frequency characteristic ranges from 5 c/sec to 10 megac/sec at the value of gain factor $k = 500$ and to 3 megac/sec at $k = 1,000$.

A mechanical modulator of light can modulate the light of any spectral composition, within the limits of quartz lenses.

The practical resolution ability of the ultrataumeter with the mechanical light modulator amounts to 10^{-8} sec.

Two more ultrataumeters were constructed:

1. The ultrataumeter with an electro-optical modulator of light. It was designed for modulation of light within the visual portion of the spectrum. It was applied for studying kinetics of the infra-red luminescence of cuprous oxide.

2. The ultrataumeter for studying kinetics of cathodoluminescence. Relaxation times of cathodoluminescence up to 10^{-7} sec can be measured with the aid of this device.

The article contains 13 circuits and 4 figures.

The bibliography lists 25 references, all of which are Slavic (Russian).

Card 2/3

TITLE: Ultrataumeter (Ul'trataumetr) 48-4-43/48

The report was followed by a short discussion.

INSTITUTION: Not indicated

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 3/3

L 51526-65
ACCESSION NR: AP5015323

UR/0286/65/000/009/0077/0077
535.885.5(088.8) 10
B

AUTHOR: Vinogradov, G. E.; Zavodchikov, G. I.; Tel'tevskiy, I. A.; Kolomiytsov,
Yu. V.; Golubovskiy, Yu. M.; Mikhaylova, K. A.; Kudryavtsev, M. P.; Peryshkov, N.
S.; Nefedov, B. L.; Tkachuk, N. N.; Rodzevich, I. V.; Samurov, L. A.

TITLE: A photoelectric autocollimation tube. Class 42, No. 170707

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 77

TOPIC TAGS: collimator, optical equipment, photocell

ABSTRACT: This Author's Certificate introduces a photoelectric autocollimation tube which contains an optical system for projecting an image of the working slit on a reflecting autocollimation mirror. The optical system then projects the autocollimation image onto photocells which are connected in an electric measuring circuit. This circuit puts out a signal which corresponds to the position of the sight axis of the optical system with respect to the autocollimation mirror. The instrument is designed for reliable operation and simplified construction. The working slit is made up of reflecting fins, e.g., mirrors, fastened to a transpa-

Card 1/2

L 51526-65
ACCESSION NR: AP5015323

rent plate in the focal plane of the main lens of the projection system. These reflectors direct the autocollimation image of the working slit along auxiliary optical channels to the photocells which operate on an on-off basis. The photocell located in the main channel, which receives the autocollimation image passed by the working slit, also operates on an on-off basis.

ASSOCIATION: none

SUBMITTED: 08Ju163

ENCL: 00

SUB CODE: EC

NO REF SOV: 000

OTHER: 000

AS
Card 2/2

PROKOPENKO, A.G., inzh.; GORESHNIK, A.D., inzh.; TKACHUK, N.V., inzh.;
BRAGINSKIY, V.A., inzh.; GALATSAN, V.N., inzh.; MAKHLIN, V.A., inzh.

Analysis of the start operation of warm 150 Mw. single-block
units. Teploenergetika 10 no.8:2-10 Ag '63. (MIRA 16:8)

1. Yuzhnoye otdeleniye Gosudarstvennogo tresta po organizatsii
i rat̄sionalizatsii rayonnykh elektrostantsiy i setey, Khar'kovskiy
turbogeneratornyy zavod i Gosudarstvennoye upravleniye
energeticheskogo khozyaystva Dnepropetrovskoy oblasti.
(Boilers) (Steam turbines)

TKACHUK, R.B. (Moskva)

"Methodology of teaching electric engineering in secondary schools"
by M.A.Ushakov. Reviewed by R.B.Tkachuk. Fiz.v shkole 21
no.3:103-104 My-Je '61. (MIRA 14:8)
(Electric engineering--Study and teaching)
(Ushakov, M.A.)

ACC NR: AP7002668

SOURCE CODE: UR/0109/67/012/001/0098/0105

AUTHOR: Arkhipova, A. M.; Tkachuk, P. M.; Fedorus, G. A.

ORG: Institute of Semiconductors, AN UkrSSR (Institut poluprovodnikov AN UkrSSR)

TITLE: Threshold characteristics of CdS photoresistors

SOURCE: Radiotekhnika i elektronika, v. 12, no. 1, 1967, 98-105

TOPIC TAGS: photoresistor, photosensitivity, Cadmium sulfide

ABSTRACT: The voltage and photosensitivity of CdS photoresistors was experimentally studied to establish the application of the photoresistors in recording weak alternating light signals. The 4 x 1-mm film specimens were prepared from CdS single crystals (50—100 μ thick) obtained by vapor-phase synthesis of Cd and S on a glass substrate. The noiseless contacts were made by vacuum deposition of indium on the ends of the specimens (the photosensitive area is 1 mm²). The experiment shows that both high- and low-resistance photoresistors have a minimum sensitivity threshold [(3—6) x 10⁻¹⁰ lm cps^{-1/2} (1.5—3) x 10⁻¹¹ w cps^{-1/2}] at 1—10 lux illumination for a light source with a color temperature corresponding to 2854K. The sensitivity threshold for light pulses in the spectral range of CdS maximum sensitivity ($\lambda = 0.51 \mu$) is 5 x 10⁻¹³ w cps^{-1/2} at 10 lux white light illumination. The voltage

Card 1/2

UDC: 621.383.4

ACC NR: AP7002668

sensitivity of CdS photoresistors is 2—10 v/lm at 1 v d-c constant voltage. Orig. art. has: 6 figures, 1 table, and 3 formulas.

SUB CODE: 09, 20/ SUBM DATE: 13Jul65/ ORIG REF: 010/ OTH REF: 001/
ATD PRESS: 5112

Card 2/2

TKACHUK, R.F.

Functional state of the adrenal cortex in tuberculosis of the
kidneys. Urologiia 27 no.4:24-26 Jl-Ag '62. (MIRA 15:11)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. A.G.
Martynyuk) Ternopol'skogo meditsinskogo instituta.
(ADRENAL CORTEX) (KIDNEYS---TUBERCULOSIS)

PRACHOK, R.P.

Function of the adrenal cortex in patients with malignant neoplasms of the kidneys. Vop. onk. 11 no.11 36-41 '66.
(NIPR 1953)

1. Iz kafedry fiziologicheskoy kirurgii (zav. - prof. A. Gukovskiy)
Ternopol'skogo med. nauchno-issled. instituta (rektor - docent V. Ye. Ogiy).

TKACHUK, S.A.

Method for suturing the wound in clean operations. Khirurgia
Supplement: 65 '57. (MIRA 11:4)
(Surgery, OPERATIVE)

TKACHUK, S.G.

Call Nr: AF 1095038

AUTHOR: Samoylovich, A. G.

TITLE: Thermodynamics and Statistical Physics
(Termodinamika i statisticheskaya fizika)

PUB. DATA: Gosudarstvennoye izdatel'stvo tekhniko-teoreticheskoy literatury, Moscow, 1955, 2nd ed., 368 pp., 8,000 copies.

ORIG. AGENCY: None

EDITOR: Tkachuk, S.G., and Kuznetsova, Ye.B., Tech. Ed.
Tumarkina, N.A.; Ed. of the Publishing House: Gurov, K.P.

PURPOSE: Approved by the Ministry of Higher Education as a textbook for state universities, this book is said to be the first complete text written for both parts of the course on thermodynamics and statistical physics.

COVERAGE: See Table of Contents. The book deals with Russian contributions. There are 51 references, of which 40 are USSR, 1 German, and the remainder translations into Russian. Personalities mentioned include: Korenblit, L.L., Candidate of Phys.-Math.Sciences, Chernovtsy State

Card 1/10

Call Nr: AF 1095038

Thermodynamics and Statistical Physics (Cont.)

University; Dakhovskiy, I. V., Assistant; Kon'kov, V. I.,
Gor'kiy Pedagogical Institute; Kholodenko, L. P.,
Gor'kiy State University; Yakovlev, V. A., Chernovtsy
State University.

TABLE OF CONTENTS

Foreword to Second Edition	7
Foreword to First Edition	8
Introduction	9
Chapter I. Basic Principles of Thermodynamics	
1. Thermodynamic equilibrium -- a special type of flow. . .	10
2. Factors determining the properties of a system in a state of thermodynamic equilibrium.	12
3. Temperature as the measure of the intensity of heat flow.	13

Card 2/10

Call Nr: AF 1095038

Thermodynamics and Statistical Physics (Cont.)

4. Characteristic parameters of a system in a state of thermodynamic equilibrium. Equation of state.	16
5. Quasistatic and nonstatic transitions between states of equilibrium.	20
6. Concepts of energy, work, and heat quantity	21
7. Macroscopic work of a system as a whole	24
8. Internal energy	27
9. First principle of thermodynamics	29
10. Heat capacity. Principle of the thermostat. Latent heat.	30
11. Polytropic processes.	34
12. Pfaff's holonomic and nonholonomous forms.	36
13. Second principle of thermodynamics for quasistatic processes	42
14. Entropy and absolute temperature.	43
15. Additivity of entropy. Gibbs paradox	51
16. Derivation of simpler correlations.	55
17. Classical formulations of the second law of thermodynamics. Single-valued entropy.	59
18. Nonholonomy of thermally heterogeneous systems	64
19. Basic thermodynamic functions	66

Card 3/10

Call Nr: AF 1095038

Thermodynamics and Statistical Physics (Cont.)

20. Derivation of some important formulas.	72
21. Joule-Thompson effect.	77
22. Thermodynamics of dielectrics.	80
23. Thermodynamics of system with a variable number of particles	89
24. Galvanic element	91
25. Irreversibility of nonstatic processes	97
26. Second principle of thermodynamics for nonstatic processes.	101
27. Clausius inequality.	104
28. Work maximum	105
29. Efficiency coefficients of heat engines.	109
30. General conditions for thermodynamic equilibrium	111
31. System equilibrium in fields of force.	119
32. Stability conditions for the state of equilibrium of a homogeneous system	122
33. State of metastability. Phenomena of hysteresis	125
34. Le Chatelier-Brown principle	129

Card 4/10

Thermodynamics and Statistical Physics (Cont.) Call Nr: AF 1095038

- 35. Classical formulations of second principle of thermodynamics and nonstatic processes. Critique of the reactionary theory of universal "thermal death". 132
- 36. Basic concepts of new thermodynamic theory of nonstatic processes 135
- 37. Thermodynamics of thermoelectrical phenomena. 139
- 38. Brief review of the basic concepts and principles of thermodynamics 147

Chapter II. Basic Principles of Statistical Physics

- 39. Lomonosov and the basic concepts of the kinetic theory of heat 149
- 40. Impossibility of reducing thermodynamics to mechanics. Engel's view of heat as a special form of motion of matter 150
- 41. Dynamic and statistical rules 153
- 42. Macroscopic and microscopic approach to the state of a system 161
- 43. Fundamental principles of statistical physics 164

Card 5/10

Call Nr: AF 1095038

Thermodynamics and Statistical Physics (Cont.)

44. Processes of relaxation. State of thermodynamic equilibrium as a special form of motion	166
45. Relaxation as a stochastic process.	167
46. System of differential equations for the state of microscopic probability. Analysis of the general solution.	171
47. Equiprobability of microscopic state. Microclassical distribution	174
48. Gibbs' classical distribution	176
49. Possibility of substituting classical distribution for microclassical distribution	181
50. Derivation of thermodynamic laws for quasistatic processes	185
51. Second principle of thermodynamics for nonstatic processes. Heat exchange.	191
52. General proof of the principle of entropy rise.	196
53. Critical evaluation of the results.	198
54. Experiments of Svedberg. Smolukhovskiy's theory.	200
55. Mechanism of irreversibility from the microscopic point of view.	202

Card 6/10

Call Nr: AF 1095038

Thermodynamics and Statistical Physics (Cont.)

56. Two interpretations of the principle of entropy rise . . .	204
57. Theory of fluctuations	205
58. Fluctuations and impossibility of a second type of perpetuum mobile	212
59. Non-applicability of results obtained in statistical physics to the physics of the universe	213
60. Gibbs' distribution for system with a variable number of molecules	215
61. Boguslavskiy's distribution	220
62. Brief review of concepts and principles of statistical physics	221

Chapter III. Some Applications of Statistical Physics in Research
on Classical Systems

63. Nonvariability of phase volume in regard to classical transformations	224
64. Free energy and equation of state for an ideal gas. Gibbs paradox	228
65. Equation of state for a non-ideal gas	235

Card 7/10

Call Nr: AF 1095038

Thermodynamics and Statistical Physics (Cont.)

66. Dielectrics and paramagnetics	240
67. Regulation processes in binary metal alloys	245
68. Maxwell distribution	260
69. Maxwell-Boltzmann distribution	263
70. A different derivation of the Maxwell-Boltzmann distribution	270
71. Boltzmann principle and entropy of a non-equilibrium ideal gas	273
72. Statistical sum conversion theorem	275
73. Law of uniform energy distribution according to the degree of freedom and classical theory of heat capacity .	279
74. Fluctuating continuum as a system of harmonic oscillators	286
75. Rayleigh-Jeans formula	291

Card 8/10

Call Nr: AF 1095038

Thermodynamics and Statistical Physics (Cont.)

Chapter IV. Quantum

76. Formulation of problem	294
77. Planck formula as an empirical fact	295
78. Planck formula and quantization of oscillator energy.	297
79. Heat capacity of solid bodies	299
80. Radiation fluctuations and the photon theory.	307
81. Calculation of interference fluctuations in wave field.	315
82. Statistical derivation of Wien formula. Nonapplicability of classical statistics to photons	317
83. Quantum synthesis of waves and particles.	319
84. Bose-Einstein distribution. Radiation as a photon gas.	324
85. Fermi-Dirac distribution	326
86. Comparison of three derivations of distribution. Temperature of degeneracy	329
87. Entropy of quantum nonequilibrium ideal gas	330
88. Variations in the number of particles and the wave aspect of matter	332
89. Electron gas in a metal at absolute temperature	333

Card 9/10

Call Nr: AF 1095038

Thermodynamics and Statistical Physics (Cont.)

90. Bose-Einstein and Fermi-Dirac equations of state for gases	338
91. Monoatomic quantum gas	343
92. Thermodynamics of a highly degenerate electron gas	344
93. Electron gas in semi-conductors	347
94. Thermodynamic functions of photon gas	351
95. Highly degenerate Bose-Einstein gas	353
96. Remarks on the basic principles of the Nernst heat theorem.	360
Bibliography	367

AVAILABLE: Library of Congress

Card 10/10

TKACHUK

ZAVEL'SKIY, Fridrikh Samuilovich; TKACHUK, S.G., redakter; MURATOVA, N.Ya.,
tekhnicheskiy redakter.

[Time and its measurement; from the billionth of a second to billions
of years] Vremia i ego izmerenie; et milliardnykh delei sekundy do
miliardov let. Moskva, Gos. izd-vo tekhn-teoret. lit-ry, 1955. 174 p.
(Time measurements) (MLRA 9:5)

SHVIDKOVSKIY, Yevgeniy Georgiyevich; TKACHUK, S.G., redaktor; ZHABOTINSKIY, Ye.Ye., redaktor; AKHILAMOV, S.N., tekhnicheskij redaktor

[Some problems in the viscosity of molten metals] Nekotorye voprosy viazkosti rasplavlenykh metallov. Moskva, Gos.izd-vo tekhniko-teoret. lit-ry, 1955. 206 p. (MLRA 9:3)
(Metals--Testing)

AUTHORS: Moshkov, Ye.A., Tkachuk, S.S. SOV/21-58-11-27/28

TITLE: The Effect of Bromine and Caffeine on the Thyroid Gland Activity of Certain Birds (Vliyaniye broma i kofeina na aktivnost' shchitovidnoy zhelezy nekotorykh ptits)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 11,
pp 1268-1271 (USSR)

ABSTRACT: Data is presented on the effect of definite doses of potassium bromide and pure caffeine on the thyroid gland activity in adult male sparrows and young drakes of the Peking breed, subjected to conditions of a long or short day. The administered dose of bromine stimulated thyroid activity in the sparrows regardless of the lighting conditions. Caffeine exerted a similar, but less intense, effect under conditions of a short light day, whereas with longer periods of illumination the thyroid gland activity was lower in birds of this group. No clear-cut results as to the effect of bromine and caffeine on the thyroid gland and testis were obtained in the experiments on drakes. The problem of the mutual effect of the thyroid gland activity on that of the reproductive glands remains as yet unsolved and requires further experimental investigations.

Card 1/2

SOV/21-58-11-27/20

The Effect of Bromine and Caffeine on the Thyroid Gland Activity of Certain Birds

There are: 1 table, 1 graph and 19 references, 15 of which are Soviet, 1 French, 1 American and 2 English.

ASSOCIATION: Institut zoologii AN UkrSSR (Institute of Zoology of the AS UkrSSR)

PRESENTED: By Member of the AS UkrSSR, A.P. Markevich

SUBMITTED: May 26, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

Card 2/2

S/169/62/000/012/087/095
D228/D307

AUTHOR: Tkachuk, T.Ya.

TITLE: Materials of glaciologic research. Zailiyskiy Alatau. Meteorology. No. 8: Actinometric observations

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 66,
abstract 12V388 (Otd. geogr. AN KazSSR, N., 1962,
135 pp., illust.)

TEXT: The materials of actinometric observations, carried
out at the station Tuyuksu-2 in 1958, are published. The materials
were processed and prepared for publication in the glaciologic
group of the Otdel' geografii AN Kaz SSR (Department of Geography,
AS KazSSR). ✓

[Abstracter's note: Complete translation]

Card 1/1

TKACHUK, V., starshiy leytenant, komandir motostrelkovoy roty

Training of physically hardened soldiers. Komm. Vooruzh. Sil
46 no.20:48-52 O '65. (MIRA 18:12)

BOBRINSKIY, V.M.; BUKATCHUK, P.D.; BURGELYA, N.K.; DRUMYA, A.V.;
KAPTSAN, V.Kh.; MAKARESKU, V.S.; NEVRYANSKIY, D.G.;
NEGADAYEV-NIKONOV, K.N.; PERES, F.S.; ROMANOV, L.F.;
ROSHKA, V.Kh.; SAFAROV, E.I.; SAYANOV, V.S.; SOBETSKIY,
V.A.; TKACHUK, V.A.; KHUBKA, A.N.; EDEL'SHTEYN, A.Ya.;
LUTOKHIN, I., red.

[Paleogeography of Moldavia] Paleogeografiia Moldavii.
Kartia, moldoveniaske, 1965. 145 p. (MIRA 18:9)

1. Otdel palenotologii i stratigrafii AN Moldavskoy SSR
(for Negadayev-Nikonov, Roshka, Romanov, Sobetskiy, Khubka).
2. Institut geologii i poleznykh iskopayemykh Gosudarstvennogo
geologicheskogo komiteta SSSR (for Bobrinskiy, Burgelya,
Nevryanskiy, Tkachuk, Edel'shteyn). 3. Opornaya seysmostantsiya
AN Moldavskoy SSR (for Drumya). 4. Gosudarstvennyy proizvod-
stvennyy geologicheskiy Komitet Moldavskoy SSR (for Bukatchuk,
Kaptsan, Safarov).

TKACHUK, V.A., monter radiosvyazi

Specialists in precision equipment. Avtom. telem. i sviaz' 8
no.2:18 F '64. (MIRA 17:6)

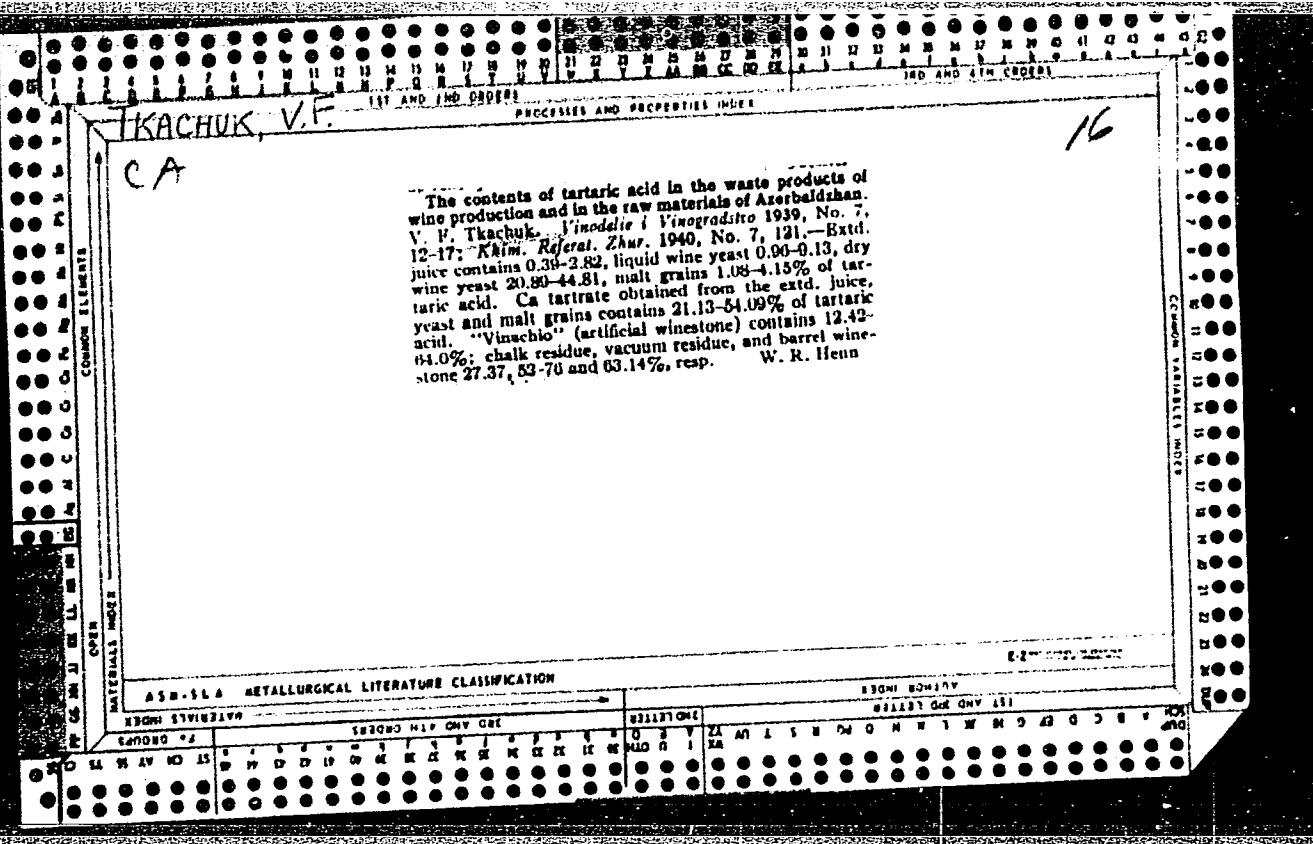
1. Ilanskaya distantsiya signalizatsii i svyazi Vostochno-Sibirskoy dorogi.

PARFENT'YEV, V.F.; TKACHUK, V.A.; SHCHETININA, Ye., red.;
TARAKANOVA, V., tekhn. red.

[Architectonics of the blood vessels of the thymus gland during
early ontogenesis] Arkhitektonika krovenosnykh sosudov vloch-
kovoi zhelez v rannem ontogeneze. Kishinev, Gos.izd-vo "Kartia
moldoveniaske," 1961. 123 p. (MIRA 15:6)
(THYMUS GLAND--BLOOD SUPPLY)

TKACHUK, V.A., Cand Med Sci--(diss) "Architectonics of ^{the} intraorgan
vessels of the ^{human} ~~Thymus~~ gland in humans in early ontogenesis." Kishinev,
1958. 14 pp (Kishinev State Med Inst. Chair of Normal Anatomy), 250 copies
(KL,26-53,117)

-169-



TKACHUK, V.G., doktor geol.-miner. nauk, otd. red.; LOMONOSOV,
I.S., kand. geol.-miner. nauk, red.; PINNEKER, Ye.V.,
kand. geol.-miner. nauk, red.; YASHITSKAYA, N.V., red.;
FILIPPOVA, B.S., red.; SHOKHET, B.S., red.izd-va;
GUS'KOVA, O.M., tekhn. red.

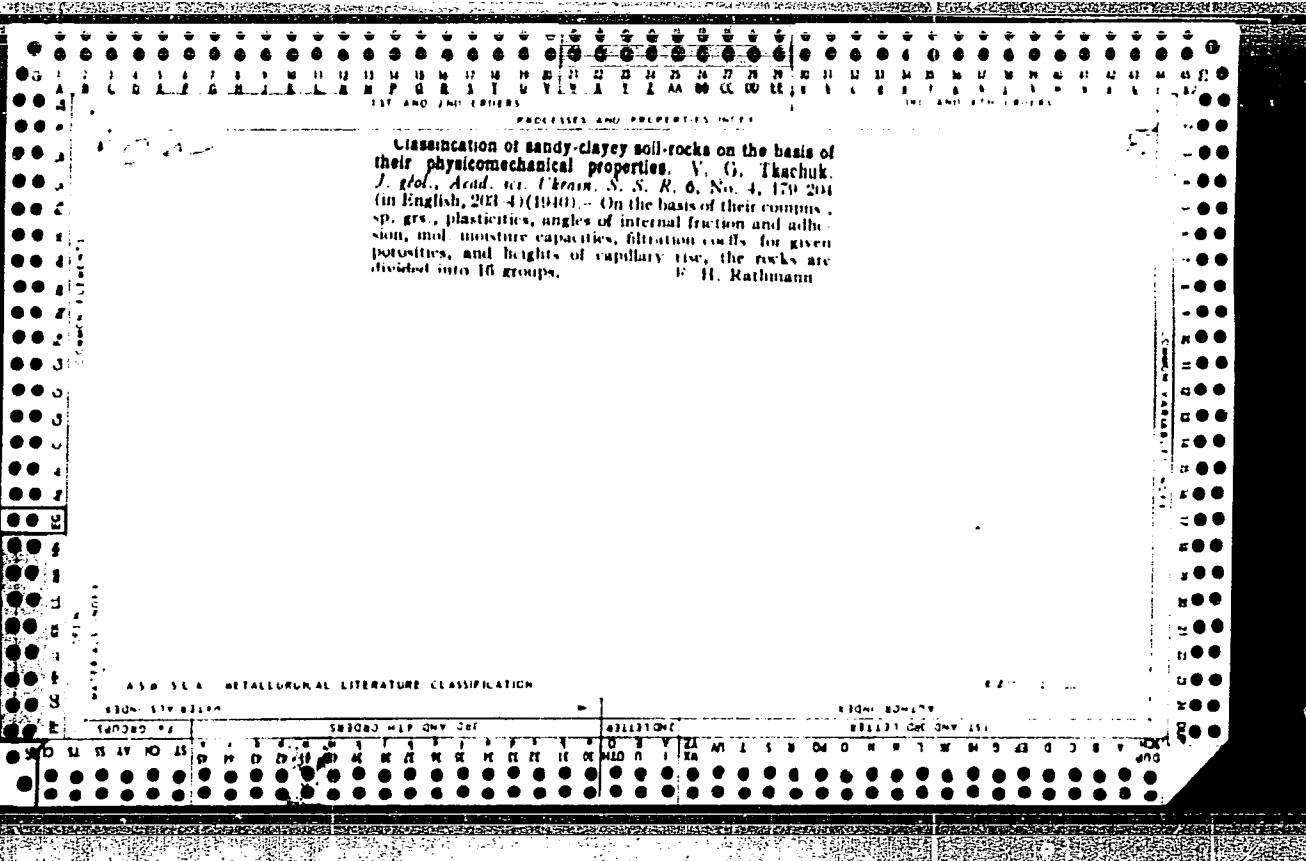
[Mineral waters of Eastern Siberia] Mineral'nye vody
Vostochnoi Sibiri. Izd-vo AN SSSR, 1963. 148 p.
(MIRA 17:1)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut
zemnoy kory.

TKACHUK, V.G., doktor geol.-miner. nauk, otv. red.; YURK, Yu.Yu., doktor geol.-min. nauk, red.; IVANOV, B.N., kand. geogr. nauk, red.; GOLOVTSYN, V.N., doktor geol.-min. nauk, red.; VOINSTVENSKIY, M.A., doktor bio.. nauk, red.; SHUL'TS, P.N., kand. ist. nauk, red.; DUBLYANSKIY, V.N., kand.geol.min. nauk, red.; SERDYUK, O.P., red.izd-va; TURBANOVA, N.A., tekhn. red.

[Transactions of the Joint Karst Expedition] Trudy Kompleksnoi karstovoi ekspeditsii. No.1.[Studying karst in the Crimea] Is-sledovaniia karsta Kryma. 1963. 170 p. (MIRA 17:3)

1. Akademiya nauk URSR, Kiev. Kompleksnaya karstovaya ekspeditsiya.



TKACHUK, . .J.

Tkachuk, V.G. "Determination of the increment to the groundwater cycle and its seasonal level fluctuation", Trudy Laboratorii gidrogeol. problem im. akad. Savarenko o, Vol. II, 1949, p. 183-93, - Bibliog: 8 items.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

1. TKACHUK, V. G.
 2. USSR (600)
 4. Water, Underground
 7. Principles of the division of ground waters of flat regions on the basis of the conditions of balance formation. Trudy Lab. gidrogeol. prob. 1951.
9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

14

CA

Conditions for formation of subterranean waters of chloride-alkali-calcium type. S. Z. Sal'dakovskii, V. G. Tkachuk, and S. M. Tsvik (Mineral. Inst., L'vov). *Doklady Akad. Nauk S.S.R.* **80**, 791 (1951). Waters of the above type were found by the authors under extremely variable conditions, at times very close to the surface. It is suggested that CaCl₂ appears in such waters from extr. or leaching and by exchange reactions with the minerals in contact with aq. solns., which can occur at any depth, although deep-lying deposits would tend to give waters of more stable compn. G. M. Kosolapoff

TKACHUK, V.G.; SAYDAKOVSKIY, S.Z.

On V.B.Porfir'ev's and V.F.Linetskii's book "Problems in petroleum migration. Reviewed by V.G.Tkachuk, S.Z.Saidakovskii. Neft.khoz. 32 no.6:93-96 Je*54." (MLRA 7:6)
(Porfirev, V.B.) (Linetskii, V.F.) (Petroleum--Geology)

TKACHUK, V.G.

Types of underground waters in the Carpathian region. Gidrokhim.
mat. 23:62-69 '55. (MIRA 9:2)

1. Institut geologii poleznykh iskopayemykh Akademii nauk USSR,
L'vov.
(Carpathian Mountains--Water, Underground)

particular rocks occurring in certain areas near oil wells. Under lab conditions it was shown that the appearance of CaCl₄ in underground waters is the result of interaction between their Na content and the Ca of the rock.

4c 2

Tkachuk, V. G.

USSR/Geology - Conferences

Card 1/1 Pub. 124 - 30/39

Authors : Tkachuk, V. G., Dr. of Geol. Mineral. Sc.

Title : Exploration of ground waters in eastern Siberia

Periodical : Vest. AN SSSR 26/2, 127-128, Feb 1956

Abstract : Minutes are presented from a conference held at the Eastern Siberian Branch of the Acad. of Sc., USSR in Irkutsk where the study of underground waters of eastern Siberia was the main topic of discussion.

Institution :

Submitted :

TKACHUK, V.G., otv.red.; PRESNYAKOV, Ye.A., red.; SHUVALOV, P.A., red.;
SOROKINA, T.I., tekhn.red.

[Studies on underground waters in Eastern Siberia] Materialy
po podzemnym vodam Vostochnoi Sibiri. Irkutskoe knizhnoe
izd-vo, 1957. 180 p. (MIRA 12:5)

1. Akademiya nauk SSSR. Vostochno-Sibirskiy filial, Irkutsk.
2. Institut geologii Vostochno-Sibirskogo filiala AN SSSR;
Irkutskoye geologicheskoye upravleniye Ministerstva geologii
i okhrany nedor SSSR (for Tkachuk). 3. Irkutskiy gosudarstvennyy
universitet im. A.A.Zhdanova (for Presnyakov).
(Siberia, Eastern--Water, Underground)

TKACHUK, V.G.; GRICHISHCHEV, Ye.K.

Basic lines of work done at the Institute of Geology of the East
Siberian Branch of the Academy of Sciences of the U.S.S.R. in the
field of engineering geology and hydrogeology. Inv. vost. fil. AN
SSSR no.1:143-144 '57. (MIRA 11:4)
(Siberia, Eastern--Geological research)

MOLODYKH, I.I.; TKACHUK, V.G., doktor geologo-mineral.nauk, red.

[Loess in the southern part of the area between the Angara and
Oka rivers] Lessovye porody iuzhnoi chasti Angaro-Okinskogo
mezhdurech'ia. Irkutsk, Akad.nauk SSSR, 1958. 54 p.

(MIRA 13:7)

(Siberia, Eastern--Loess)

TKACHUK, V.G., otv.red.; PAL'SHIN, G.B., red.; BELOV, I.V., red.;
SHOTSKIY, V.P., red.; PERLOVICH, B.F., red.; MISNIKOV, V.V.,
tekhn.red.

[Materials for the young scientists' conference dedicated to
the 10th anniversary of the West Siberian Branch of the
Academy of Sciences of the U.S.S.R.] Materialy k konferentsii
molodykh nauchnykh sotrudnikov; k 10-letiiu Vostochno-Sibirekogo
filiala AN SSSR, Irkutsk. No.1. [Geology and geography]
Geologija i geografiia. 1958. 153 p. (MIRA 10:13)

1. Akademija nauk SSSR. Vostochno-Sibirski filial, Irkutsk.
(Siberia, Western--Geology) (Siberia, Western--Geography)

KACHUK, V.G.

AUTHOR: Kachuk, V.G., Doctor of Geological and Mineralogical Sciences; Ovchinnikov, A.P., Candidate of Geological and Mineralogical Sciences

TITLE: Identification of frozen waters and the technical ecology of East Siberia (Zapovednoye basin) vol. 3. Institute of hydrogeology and glaciology filial of the Institute of Geology and Geophysics in Irkutsk (Soyuzgiprogeofiz) v. 1958

PERIODICAL: Vestnik Akademii Nauk SSSR, 1958, No. 6, pp. 11-14 (USSR)

ABSTRACT: This conference was held from June 2 - 8. It was jointly the Institut ekologii Poststremo-Sibirskego filiala Sibirskogo otdeleniya "Institute of Ecology of the East Siberia Branch of the Siberian Department", by the Institut perzletovedeniya (V. N. Obuchayev (Institute of Frozen Soil Science under V. I. Obuchayev) and by the laboratoriya hidrogeologicheskikh problem in T. P. Devjatova (laboratory of Hydrogeological problems in T. P. Devjatova) and by the Uralo-Sibirskiy Ministerstvo geologii i gornoj promst. USSR (Institution of the Ministry of Geology and the Protection of Mineral Re-

Card 1/3

Soviet - 8-1958

Investigation of Ground Water and the Technical Geology of East Siberia.
Transactions of the Conference in Irkutsk

sources (SIR), i. e., Geological and hydrogeological data from a
Trilnitsk, Bugaytinskaya, by the Sosnovskaya expedition.
145 representatives from 50 different institutions of the
country participated in the work of the conference, and 111
reports submitted. 7 were accepted. An article on "On
the first variant of a hydrogeological map of the part of
the Asiatic part of the USSR was discussed in the first
plenary meeting, as well as results of the investigation
of the mineral springs of the southern part of East Siberia.
The further work of the conference proceeded in three sections:
For general problems and problems of research methods, for
regional hydrogeology, for technical geology and frozen soil
science. The fast progress of industrialization in East Siberia,
and the further development of its agriculture present new
tasks. The meeting outlined a further program of future work.
This incorporates an increase of the area to be covered by
cartographical survey and the compilation of a number of maps.
The meeting recommended to establish special departments of
hydrology and technical geology in the territorial geological
administrations of the Ministry of Geology and protection of

Card 2/3

Investigation of the Soviet Union's military technical development in the field of aircraft engines and aircraft materials.

Object of study: The Soviet Union's research, development, and production facilities in aircraft engines and aircraft materials. Investigations are to be conducted in the following areas: The subjects are to be addressed at the University and the Polytechnical Institute of Tsentralnoye.

Card 3/3

FRASHER, ✓-6
P-2

AUTHOR: Afanas'yev, A. N. SOV/50-58-11-23/25

TITLE: Second Conference on Ground Waters and Engineering Geology in East Siberia (Vtoraya soveshchaniye po podzemnym vodam i inzhe-nernoy geologii Vostochnoy Sibiri)

PERIODICAL: Meteorologiya i gidrologiya, 1958, Nr 11, pp 68-69 (USSR)

ABSTRACT: The conference mentioned in the title was held in Chita from June 2 to 7, 1958. It had been organized by the Institut geo-
logii Vostochno-Sibirskogo filiala AN SSSR (Institute of Geo-
logy of the East Siberian Branch, AS USSR), the Institut mer-
lotovedeniya im. V. A. Obrucheva AN SSSR (Institute of Ground
Frost Science imeni V. A. Obruchev, AS USSR), the Laboratoriya
gidrogeologicheskikh problem im. F. F. Savaren'skogo (Laboratory
of Hydrogeological Problems imeni F. F. Savaren'skiy), the
Chitinskoye, Irkutskoye and Buryat'skoye geologichesk'ye upravle-
niya, Ministerstva geologii i okhrany nedor SSSR (Chita, Irkutsk,
and Buryat Geological Administration of the Ministry of Geolo-
gy and Protection of Natural Resources, USSR), and the Sosnov-
skaya ekspeditsiya (Sosnovskaya Expedition). 12 lectures were
held at the Plenary Meetings. They dealt with the results and
tasks of hydrogeological and engineering-geological exploration

Card 1/4

Second Conference on Ground Waters and Engineering
Geology in East Siberia

SOV/50-58-11-23/25

of East Siberia, exploitation of natural resources, protection of mineral waters as well as the methods of compiling comprehensive and regional geological and hydrochemical multi-purpose maps. The greatest attention was attracted by the lectures delivered by I. K. Zaytsev "Hydrogeological Multi-purpose Maps of East Siberia 1:2,500,000" and two lectures by V. G. Tkachuk "The Mineral Waters of East Siberia" and "The Formation of Thermal Waters of the Sayano-Baykal'skiy Mountainous Region". The Conference consisted of three sections: 1) for general and methodical problems of hydrogeology, 2) for regional hydrogeology, and 3) for engineering geology and ground frost science. 17 lectures were heard in the first section: V. M. Stepanov confirmed the opinion of N. K. Ignatovich, stating that there is a vertical zone distribution in the formation of hydrochemical elements in mountainous regions. 22 lectures were heard in the second section. The losses caused by the outflow of the river bed discharge in the Bratskoye reservoir were submitted to sharp criticism. In the lecture delivered by V. V. Klimochkin (Buryatskiye geologicheskoye upravleniye = Buryat Geological Administration): "On the Condensed Water of

Card 2/4

Second Conference on Ground Waters and Engineering
Geology in East Siberia SOV/50-58-11-23/25

the West Zabaykal'ye (Transbaykal)" condensed water was proved to increase with rising height of the slopes in certain mountainous regions (up to 30% of the total balance of ground waters). The author of the present paper held a lecture: "On the Ground Water Component in the Selenga River Basin." The local dependences which were determined for the average annual subterranean discharge in the rivers are indicative of an increase in the discharge with the height and vice versa. The participants' attention was attracted by the lecture held by V. M. Lylo (Irkutsk UGMS). He dealt with the role played by the ground water in feeding some rivers of East Siberia. Despite a certain approximation of his data the role of this discharge is very important. 18 lectures were heard and discussed in the third section. The Conference adopted a very important decision: hydrogeological investigations in East Siberia are to be extended, hydrological laboratories and stations are to be built, the relation between the sub- and superterranean waters is to be investigated, and finally, the role played by the condensation and discharge of ice on

Card 3/4

Second Conference on Ground Waters and Engineering
Geology in East Siberia

SOV/50-58-11-23/25

the earth's surface in the balance of the waters mentioned
is to be determined.

Card 4/4

20-118-6-36/43

AUTHOR:

Tkachuk, V. G.

TITLE:

On the Types of Thermae of the Sayano-Baykal'skaya
Mountain Region (O tipakh term Sayano-Baykal'skoy
gornoy strany)

PERIODICAL:

Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 6,
pp. 1176-1179 (USSR)

ABSTRACT:

There is an abundance of mineral springs in this region (up to 50 springs). Individual districts are described (reference 3). The thermal springs are bound to large tectonic fractions. Their appearance forms frequently thermal fissures which are several dozen kilometers long. Thermae were recovered by boreholes in 2 places in loose Tertiary sediments (150 to 300, or 800 m deep respectively). The springs mostly flow from cracks of eruptive or metamorphous rocks of various age, more seldom from slightly thick, loose rocks covering them. The chemical composition of the thermal water of the region consequently cannot be influenced either by leaching of sediment masses or by the composition of the residual waters of the latter.

Card 1/4

On the Types of Thermae of the Sayano-Baykal'skaya
Mountain Region

20-118-6-36/43

The aforesaid thermae are very much varied with respect to both their chemical composition and their gases (references 6, 13, to 15). The data available on this subject are given in figure 1. The following 6 types can be separated according to temperature, chemism and gases: 1) Chloride-hyperthermal-sodium-nitrogen-waters; 2) Sulfate-sodium-nitrogen-waters, chiefly hyperthermal, sometimes thermal or subthermal; 3) hydro-carbonate sodium-nitrogen-waters, chiefly sub-thermal; 4) hydro-carbonate sodium-and calcium-carbonic acid thermal-and subthermal waters; 5) hydrocarbonate sodium- and calcium-carbonic acid thermal and subthermal; 6) hydro-carbonate sodium- and calcium carbonic acid subthermal nitrogen-waters. Type 1) is known only in a few places (Bystrinskiy, Davshinskiy, Kotel'nikovskiy and Bol'sherechenskiy springs). Most of the springs belong to type 2). There are only a small number of type 3) (Buzanskiy, Semiozerskiy and Verkhneingodinskiy springs). Transitions exist between types 2) and 3) (Bauntovskiy, Kulynnyye bolota, Seyuyskiy). Type 4) was recovered by boreholes in

Card 2/4

On the Types of Thermae of the Sayano-Baykal'skaya
Mountain Region.

20-118-6-36/43

in the villages Sukhaya Zagza and Zhemchuk. Type 5) is only found in the alpine region of Eastern Sayan where young volcanism becomes apparent. Type 6) The Yamkun-spring belongs already to the Daurskiy-region of carbonic acid waters (reference 13), as well as the springs Khoyto-Gol and Kholon-Ugun in East-Sayan (reference 11). It may be assumed, due to the variety of the thermae of the concerned region, that they are formed in various depth zones which pass over into each other. The deeper they come from, the higher is the temperature of their water. The zones of formation of a) the hydrocarbonate b) sulfate and c) chloride-sulfate thermae can be indicated on the strength of the present data. For the two latter groups the saturation is carried out by nitrogen from the nitrogen-depth-cover (reference 1). The increased chloride-content in waters of high temperature might be explained by magmatic exhalations of chlorine. The occurrence of Pb, Sn, Li, B, Cu, Au and others (references 6, 11) in hyperthermal thermae may point to the connection of the thermae with magmatic

Card 3/4

On the Types of Thermae of the Sayano-Baykal'skaya
Mountain Region

20-118 -6-36/43

occurrences. Carbonic acid hydrocarbonate nitrogen springs of low temperature form relics of carbonic acid thermae if the precipitation of metamorphous carbonic acid ceased or when its reserve is exhausted. The author proves that the nitrogen of these thermae does by no means originate from the air as is frequently maintained (references 5,9, 12). The ratio: Argon-nitrogen is here 1,3 to 1,6 and is thus always higher than 1,8, as is the case with the exterior terrestrial atmosphere. The depth-origin of nitrogen in the thermae is consequently proved. There are 1 figure and 15 references, all of which are Slavic.

ASSOCIATION:

East-Siberian Branch, AS USSR (Vostchnosibirskiy filial
Akademii nauk SSSR)

PRESENTED:

August 10, 1957, by D.I.Shcherbakov, Member, AS USSR

SUBMITTED:

August 1, 1957

Card 4/4

TKACHUK, Valentina Georgiyevna; PINNEKER, Yevgeniy Viktorovich; ODINTSOV,
M.M., doktor.geologo-mineral.nauk, otv.red.; SEPPING, N.G., red.;
PECHERSKAYA, T.I., tekhn.red.

[Underground waters of Irkutsk Province and their significance for
the national economy] Podzemnye vody Irkutskoi oblasti i ikh na-
rodnokhoziaistvennoe znachenie. Irkutsk, Irkutskoe knizhnoe izd-vo,
1959. 109 p.

(Irkutsk Province--Water, Underground) (MIRA 13:5)

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755920020-0

TKACHUK, V.G.;ANKUDINOVA, G.A.

Mineral waters in the Baikal region. Trudy Vost.-Sib.fil.AN SSSR
no.10:97-136 '59. (MIRA 13:4)
(Baikal region--Mineral waters)

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755920020-0"

TKACHUK, V. G., and PINNEKER, Ye. V.

"Areal Hydro Mapping of Some Parts of the East Siberia."

report presented at the 12 th General Assembly of the International Union
of Geodesy and Geophysics, Helsinki, 25 July - 6 Aug 60.

TKACHUK, V.G., otv. red.; DASHEVSKIY, V.V., red. izd-va; DOROKHINA,
I.N., tekhn. red.

[Underground waters of the Irkutsk coal basin] Podzemnye vody Irkutskogo uglenosnogo basseina. Moskva, 1961. 213 p. (MIRA 14:9)

l. Akademiya nauk SSSR. Sibirskoye otdeleniye. Vostochno-Sibirskiy geologicheskiy institut.
(Irkutsk Basin—Waters, Underground)

TKACHUK, V.G., doktor geologo-mineralog. nauk; TOLSTIKHIN, N.I., prof.; PINNEKER, Ye.V., kand. geologo-mineralog. nauk, mladshiy nauchnyy sotr.; YASNITSKAYA, N.V., mladshiy nauchnyy sotr., khimik; KRUTIKOVA, A.I., mladshiy nauchnyy sotr., khimik; SHOTSKIY, V.P., kand. geogr. nauk; ORLOVA, L.M., starshiy gidrogeolog; STEPANOV, V.M., kand. geologo-mineralog. nauk; VLASOV, N.A., kand. khim. nauk; PROKOP'YEV, B.V., kand. khim. nauk; CHERNYSHEV, L.A., starshiy prepodavatel'; PAVLOVA, L.I., starshiy prepodavatel'; Prinimali uchastiye: IVANOV, V.V., kand. geologo-mineralog. nauk; YAROTSKIY, L.A., kand. geologo-mineralog. nauk; KARASEVA, A.P., nauchnyy sotr.; ARUTYUNANTS, R.R., nauchnyy sotr.; ROMANOVA, E.M., nauchnyy sotr.; TROFIMUK, P.I., starshiy hidrogeolog; LADEYSHCHIKOV, P.I., starshiy nauchnyy sotr., kand. geogr. nauk; LYSAK, S.V., starshiy laborant; KRUCHININA, L.Yu., laborant; SEMENOVA, Ye.A., red. izd-va; BOCHEVER, V.T., tekhn. red.

[Mineral waters of the southern part of Eastern Siberia] Mineral'nye vody iuzhnoi chasti Vostochnoi Sibiri. Moskva. Vol.1. [Hydrogeology of mineral waters and their significance for the national economy] Gidrogeologiia mineral'nykh vod i ikh narodnokhoziaistvennoe znaenie. Pod obshchei red. V.G.Tkachuk i N.I.Tolstikhina. 1961. 346 p.

(MIRA 14:8)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Vostochno-sibirskiy geologicheskiy institut. (Continued on next card)

TKACHUK, V.G.---- (continued) Card 2.

2. Vostochno-Sibirskiy geologicheskiy institut (for Tkachuk, Pinneker, Yasnitskaya, Krutikova, Lysak). 3. Institut geografii Sibirs'kogo otdeleniya Akademii nauk SSSR (for Shostskiy). 4. Chitinskoye geologicheskoye upravleniye (for Orlova). 5. Sosnovskaya ekspeditsiya Ministerstva geologii i okhrany nedor SSSR (for Stepanov). 6. Irkutskiy gosudarstvennyy universitet (for Vlasov, Prokop'yev, Chernyshev, Pavlova). 7. Leningradskiy gornyy institut (Tolstikhin). 8. Gosudarstvennyy nauchno-issledovatel'skiy institut kurortologii i fizioterapii (for Ivanov, Yarotskiy, Karaseva, Arutyunyants, Romanova). 9. Irkutskoye geologicheskoye upravleniye (for Trofimuk). 10. Baykal'skaya limnologicheskaya stantsiya Vostochno-Sibirs'kogo filiala AN SSSR (for Ladeyshchikov). 11. Otdel ekonomiki i geografii Vostochno-Sibirs'kogo filiala AN SSSR (for Kruchinina).

(Siberia, Eastern--Mineral waters)

TKACHUK, V.G.; STEPANOV, V.M.; VOLKOVA, M.A.

Underground waters of the Buryat A.S.S.R. Mat. Kom. po izuch.
podzem. vod. Sib. i Dal' Vost. no.2:154-163 '62.
(MIRA 17:8)

TKACHUK, V.G., otv. red.; TOLSTIKHIN, N.I., red.; POPOV, I.V., red.; ZAYTSEV, I.K., red.; YEFIMOV, A.I., red.; PAL'SHIN, G.B., red.; GRECHISHCHEV, Ye.K., red.; ASTRAKHANTSEV, V.I., red.; PERLOVICH, B.F., red.; PECHERSKAYA, T.I., tekhn. red.

[Transactions of the Second Conference on Underground Waters and the Engineering Geology of Eastern Siberia held in Chita, 1958] Trudy Soveshchaniia po podzemnym vodam i inzhenernoi geologii Vostochnoi Sibiri. Irkutsk, Irkutskoe knizhnoe izd-vo. No.4. 1961. 161 p. (MIRA 16:4)

1. Soveshchaniye po podzemnym vodam i inzhenernoy geologii Vostochnoy Sibiri. 2d, Chita, 1958.
(Siberia, Eastern--Water, Underground)
(Siberia, Eastern--Engineering geology)

TKACHUK, V.G.; ROMANYUK, A.F.

Hydrogeological characteristics of the subsurface underthrust
fold in the Borislav field. Neft. i gaz. prom. no.2:7-13 Ap-Je
'62. (MIRA 15:6)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy
institut.

(Borislav region--Water, Underground)
(Borislav region--Folds (Geology))

GORDIYEVICH, Vyacheslav Afanas'yevich; KURISHKO, Vadim Arkad'yevich;
LYCHAGIN, Georgiy Aleksandrovich; RISHEES, Yevgeniya
Aronovna; TKACHUK, Valentina Grigor'yevna, doktor geol.-
miner. nauk; MEL'NIK, A.F., red.; MONZHERAN, P.F., tekhn.
red.

[Hydrogeology of the Crimea and its oil and gas potentials]
Gidrogeologija Kryma i perspektivy ego neftegazonosnosti.
Pod obshchey red. V.G.Tkachuk. Kiev, Izd-vo AN Ukr.SSR,
(MIRA 16:7)
1963. 138 p.

1. Institut mineral'nykh resursov AN Ukr.SSR (for Tkachuk,
Kurishko).
(Crimea—Petroleum geology) (Crimea—Water, Underground)

TKACHUK, V.I., sanitarnyy trach

Experience with work to improve sanitary ~~education~~ on dairy
farms. Gig. i san 28 no. 6162-64 Je '63 (MIRA 1784)

1. Iz Rovenskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.

TKACHUK, V.I., sanitarnyy fel'dsher

Health education work is an important element. Zdrav.Belor.
(MIRA 12:9)
5 no.6:57-58 Je '59.
(NAUMOVICH--HEALTH EDUCATION)

TKACHUK, V.K.

Changes in the ballistocardiogram and electrocardiogram in hypertension patients under the influence of biotron treatment.
(MIRA 16:10)
Vrach. delo no.7:55-60 Jl'63.

1. Kafedra terapii-I i kafedra nervnykh bolezney-I Kiyevskogo instituta usovershenstvovaniya vrachey (nauchnyye rukovoditeli: chlen-korrespondent AMN SSSR, prof. D.F.Chebotarev i zasluzhennyy deyatel' nauki, prof. D.I.Panchenko.)
(HYPERTENSION) (ELECTROCARDIOGRAPHY)
(BALLISTOCARDIOGRAPHY) (CLIMATOLOGY, MEDICAL)

TKACHUK, V.N.

Errors in the diagnosis of renal tuberculosis. Urologiia 28
(MIRA 17:2)
no.3:16-20 '63

1. Iz urologicheskoy kliniki (zav. - prof. A.M.Gasparyan)
I Leningradskogo meditsinskogo instituta imeni akademika
Pavlova.

GASPARYAN, A.M., prof.; TKACHUK, V.N., kand.med.nauk

Functions of the Student Scientific Society of the First
Leningrad Medical Institute. Zdrav. Ros. Feder. 8 no.2:25-28
(MIRA 17:3)
F:63

TKACHUK, V.N.

Frequency of renal tuberculosis in pulmonary tuberculosis treated
with antibacterial preparations. Urologia no.5:22-25 '62.
(MIRA 15:12)

1. Iz Urologicheskoy kliniki (zav. - prof. A.M. Gasparyan)
I Leningradskogo meditsinskogo instituta imeni I.P. Pavlova.
(KIDNEYS--TUBERCULOSIS)
(TUBERCULOSIS)

TKACHUK, V.N., kand.med.nauk

Role of the first Russian surgical school in the development
of urology. Urol. i nefr. no.2:53-57 '65.
(MIRA 1961)
1. Urologicheskaya klinika (zav. - prof. A.M.Gasparyan) 1-go
Leningradskogo meditsinskogo instituta imeni I.P.Pavlova.

TKACHUK, V.N.

P.P. Zablotskii-Desiatovskii; one of the founders of Russian urology;
on the 75th anniversary of his death. Urologia 23 no.4:3-6 J1-Ag '58
(MIRA 11:8)

1. Iz kafedry urologii (zav. - prof. A.M. Gasparyan) II Leningradskogo
meditsinskogo instituta im. akad. I.P. Pavlova.
(UROLOGY

contribution of Paul P. Zablotskii-Desiatovskii (Rus)
(ZABLOTSKII-DESIATOVSKII, PAUL PARFENOVICH, 1814-1882)

TKACHUK, V.N.

Features of the course of tuberculosis of the kidneys during
tuberculosis of the lungs under antibacterial therapy. Urologiia
25 no. 4:11-16 Jl-Ag '60. (MIRA 14:1)
(KIDNEYS—TUBERCULOSIS)

KUZNETSOV, A.T.; TKACHUK, V.P.

Studying the snow cover in Kazakhstan. Trudy Otd. geog. AN Kazakh.
(MIRA 13:12)
SSR no.7:177-183 '60.
(Kazakhstan--Snow)

GUREVICH, M.I.; TKACHUK, V.P.

Capillary changes in experimental hypertension. Medich,zhur. 24
no.6:78-82 '54. (MLRA 8:7)

1. Institut fiziologii im. O.O.Bogomol'tsya Akademii nauk URSR.
(HYPERTENSION, experimental,
capillary changes)
(CAPILLARIES, in various diseases,
exper. hypertension)

SYPCHENKO, G.I. [Sypchenko, H.I.]; MAL'TSEV, N.N. [Mal'tsev, N.M.];
TKACHUK, V.P.; KOVAL'ISHIK, E.G.; MATVEL'IT, Y.E.

Application of various methods for measuring acetaldehyde con-
centration in water solutions. Khim. prom. [Ukr.] no. 1:4-66
Ja-Mr '65. (MIRA 13:4)

TKACHUK, V.P.; GODLEVSKIY, P.F.

Operation of forging rolls at the "Svet Shakhtera" plant in Kharkov.
Kuz.-shtam. proizv. 4 no.5:31-33 My '62. (MIRA 16:5)
(Kharkov--Forging machinery)

IYEVINSH, Ya.K.; BETIN, S.G.; KHAAS, V.M.; TKACHUKOV, V.Ya.,
nauchn. red.; SHCHEGLOVA, I.B., red.

[Farm mechanization in the countries of the northwestern
zone of Europe (Finland, Sweden, Denmark, the German
Democratic Republic)] Mekhanizatsiya sel'skogo khoziaistva
v stranakh Severo-Zapadnoi zony Evropy (Finliandii -
Shvetsii - Danii - GDR); obzor. Moskva, 1963. 91 p. (Kom-
pleksnaia mekhanizatsiya i avtomatizatsiya predpriiatii.
Seriia I-63) (MIRA 17:5)

l. Moscow. Tsentral'nyy institut nauchno-tehnicheskoy in-
formatsii po avtomatizatsii i mashinostroyeniyu.

TKACHUK, Ya.I.

Some clinical characteristics of lambliasis. Vrach. delo no.8:
(MIRA 15:3)
127-128 Ag '61.

1. II terapevticheskoye otdeleniye Ternopol'skoy oblastnoy
bol'nitsy, Nauchnyy rukovoditel' - kand.med.nauk A.G. Lepyavko.
(GIARDIASIS)

TKACHUK, V.R.

Computing the horizontal components of the wind taking into account the internal friction and nonlinear acceleration terms.
Izv.AN SSSR.Ser.geofiz. no.12:1517-1519 D '58. (MIRA 12:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Winds)

SOV/ 49-58-12-13/17

AUTHOR: Tkachuk, V. R.

TITLE: Calculation of Horizontal Components of Wind with Consideration of Internal Friction and Non-Linear Treatments of Acceleration (Raschet gorizonta'nykh sostavlyayushchikh vетра pri uchete vnutrennego treniya i nelineynykh chlenov uskoreniya)

PERIODICAL: Izvestiya akademii nauk SSSR, Seriya geofizicheskaya, 1958, Nr 12, pp 1517-1519 (USSR)

ABSTRACT: The problem of distribution of wind in the layer of the atmosphere up to 1 km can be considered as a general case of motion with the correction of friction caused by the earth's surface. The equation of motion (1) can be written as:

$$v \frac{\partial^2 s}{\partial z^2} + i \ell s = 0 ; \text{ then its solution can be shown}$$

as Eq.(2) which takes the form (3) when the pressure gradient is independent of z and directed along the axis $x(P(z) = P)$. In this case the expression $P/\ell - u^*$ is the velocity of geostrophic wind. Accounting for the acceleration, the solution of Eq.(1) can be found by the method of

Card 1/3